

HISTORY

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Breast Pain

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Definition

Breast pain is a sensation of aching, pulling, drawing, burning, or stinging in one or both breasts as a result of functional or pathologic conditions of the breast or, secondarily, due to extrinsic causes.

Technique

Begin by asking whether the pain is unilateral or bilateral, localized or diffuse. If localized, ask the patient to point out the spot, if possible, with one finger and to clarify the type of pain, possible radiation to other areas of the chest wall or arm, whether it is continuous or intermittent, and any relationship to the menstrual period. The questioning at this point is intended to differentiate abnormal physiologic changes associated with engorgement and nodularity from benign lesions of physiologic origin. One should consider traumatic causes such as manual or oral manipulation dur-

ing sexual activity, exercise, sports, or change of job requiring use of one arm more than the other. Has the patient recently been under any unusual amount of physical or mental stress? Is she taking or has she changed birth control pills, which may coincide with the onset of current symptoms? Pain as a symptom with tenderness on examination are commonly but not always associated. Generally, breast pain not associated with tenderness is due to extrinsic causes. The inability to sleep on the abdomen is a good indicator of the severity of the symptoms. Previous treatment of the breast pain (hormones or pain therapy) should be obtained.

Basic Science

Innervation of the breast is provided by somatic sensory nerves and autonomic (sympathetic) motor nerves (Figure 169.1). Parasympathetic fibers do not exist in the breast.

The supraclavicular nerves (somatic) supply sensory fibers for the innervation of the upper cutaneous part of the

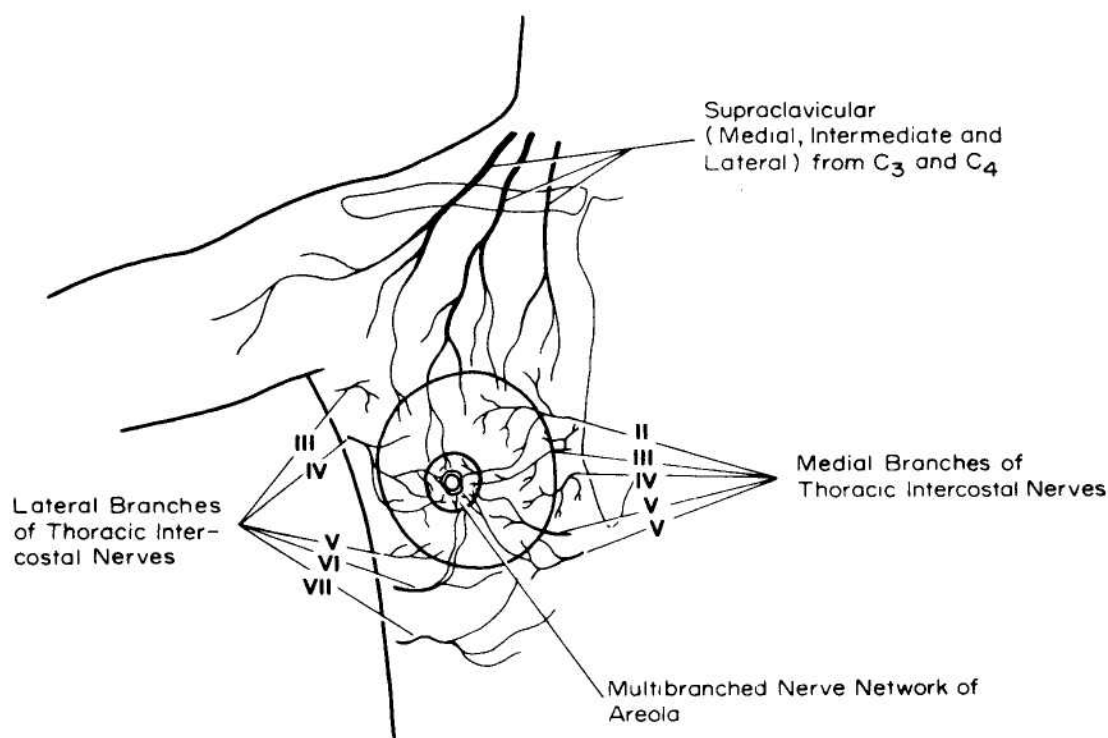


Figure 169.1
Innervation of the breast.

breast, while the lateral (IV–VI) and medial (II–IV) branches of the intercostal nerves supply the lower cutaneous parts and the mammary gland. Sympathetic motor fibers destined for the smooth muscles of the areola, nipple, and wall of the vessels travel along with all the above-mentioned nerves and then follow the arteries of the breast. The postganglionic sympathetic fibers stem from the ganglia of the paravertebral upper thoracic sympathetic chain.

In breast disease, pain is experienced in the breast itself, but because of the kind of innervation described above, it may also radiate to the side of the chest, to the back, to the base of the neck, or to the medial side of the arm.

For 4 to 5 days before the onset of menstrual flow, the blood flow to the breast increases significantly. The breast volume, measured by water displacement, may increase by up to 25%. During this time, most women experience variable degrees of tension, tightness, fullness, heaviness, and breast discomfort. Normally, these symptoms disappear after menstruation. An increase in the severity and duration of these symptoms is one of the most common reasons premenopausal patients seek medical advice for breast pain. Many women whose complaints are caused by this entity are erroneously labeled as having fibrocystic disease. Normal cyclical pain and tenderness or the exaggeration and prolongation of this normal pain are commonly bilateral, but usually the central and upper, outer portions of the breasts are more involved.

Clinical Significance

Abnormal cyclical pain and tenderness are often indistinguishable from the symptoms and findings of fibrocystic disease. Abnormal cyclical pain and tenderness usually occur in the teens and twenties, whereas fibrocystic disease usually occurs in the 30 to 50 age group. The symptoms of both entities are more severe immediately before menstruation and may be symptomatic for several cycles, followed by spontaneous improvement. When pain and tenderness are associated with the physical findings of gross cystic disease (three-dimensional palpable masses), it may be the result of leakage of the fluid from the cyst into the wall. However, the most common fibrocystic disease presenting with pain and tenderness is fibrosis and adenosis, with the symptoms being cyclical and usually associated only with nodular changes of the breast tissue rather than discrete masses. Although pain and tenderness are usually associated with benign disease, breast cancer patients commonly present with the symptom of pain, often not associated with tenderness. The type of pain is commonly bizarre.

There are causes of breast pain unrelated to fibrocystic disease or abnormal physiology. Cervical or dorsal radicu-

litis may cause tenderness and complaints of pain over the points of exits of the lateral anterior cutaneous nerves in the midaxillary line. Costochondral chondritis (Tietze's syndrome) commonly causes unilateral breast pain and tenderness localized over one or more of the costochondral articulations. Mondor's disease (thrombophlebitis of the thoracoepigastric vessels) is always associated with pain and tenderness over the lateral and inferior breast, which usually subsides spontaneously in 1 to 3 weeks. Other causes of mastodynia with or without tenderness are herpes zoster, trauma, infection, duct ectasia, and stasis. Benign neoplasms (fibroadenoma, intraductal papilloma) rarely are associated with pain and tenderness. Some workers have felt that there are different types of breast pain, depending on the etiologic factor. The pain in fibrocystic disease is often described as "heavy or full of milk." In cervical or dorsal radiculitis, the pain is "sharp and radiating"; in Tietze's syndrome, "aching"; in trauma, "sore, bruised or stabbing"; in infections, "throbbing"; and in duct ectasia, "itching, burning, or drawing." A very common entity of mastodynia, always associated with tenderness, is commonly seen in postmenopausal patients. This type of pain is usually burning and stinging, and is not associated with physical or radiographic findings of fibrocystic disease. It is most common in the central and upper portions of the breast. Patients are usually obese with above-average-size, somewhat pendulous breasts. Although the cause of pain due to this entity is not clear, it is very likely related to obesity.

If no apparent cause of the pain is found by careful history, physical examination, mammography, and ultrasound, if indicated, the patient can be reassured that there is no evidence of cancer or other disease that necessitates or warrants surgical intervention. Generally, if the patient's symptoms persist without remission for 2 to 3 months, repeat examinations are indicated.

References

- Corry DC. Pain in carcinoma of the breast. *Lancet* 1952;1:274–76.
- Egan RL. Priorities in managing breast problems: roundtable discussion. *Patient Care* 1975;9(7):20–58.
- Haagensen DC. *Diseases of the breast*. 2nd ed. Philadelphia: W.B. Saunders, 1971;101.
- Leis HP Jr. *Diagnosis and treatment of breast lesions*. New York: Medical Examination, 1970.
- Pack GT, Ariel IM. *Tumors of the breast, chest and esophagus*. Vol 4. New York: Paul B. Hoeber, 1960.
- River L, Silverstein J, Grout J, et al. Carcinoma of the breast: the diagnostic significance of pain. *Am J Surg* 1951;82:733–35.
- Vorherr H. *The Breast: Morphology, Physiology, and Lactation*. New York: Academic Press, 1974;20–70.